

**United States Department of the Interior**  
National Park Service

# National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form*. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. **Place additional certification comments, entries, and narrative items on continuation sheets (NPS Form 10-900a).**

## 1. Name of Property

Historic name Carter Bridge

Other names/site number 24PA841/MDT Identification No. S00540031+06621

## 2. Location

street & number Milepost 31.6 on Montana Secondary Highway 540 ☐ not for publication

city or town Four Miles South of Livingston ☒ vicinity

State Montana code MT county Park code 067 zip code 59047

## 3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this x nomination     request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property x meets     does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

    national   X   statewide   X   local

Signature of certifying official \_\_\_\_\_ Date \_\_\_\_\_

Title \_\_\_\_\_ State or Federal agency and bureau \_\_\_\_\_

In my opinion, the property     meets     does not meet the National Register criteria.

Signature of commenting official \_\_\_\_\_ Date \_\_\_\_\_

Title \_\_\_\_\_ State or Federal agency and bureau \_\_\_\_\_

## 4. National Park Service Certification

I, hereby, certify that this property is:

Signature of the Keeper

Date of Action

    entered in the National Register \_\_\_\_\_

    determined eligible for the National Register \_\_\_\_\_

    determined not eligible for the National Register \_\_\_\_\_

    removed from the National Register \_\_\_\_\_

    other (explain:) \_\_\_\_\_

Carter Bridge  
Name of Property

Park County, Montana  
County and State

## 5. Classification

### Ownership of Property

(Check as many boxes as apply)

<input type="checkbox"/>	private
<input type="checkbox"/>	public - Local
<input checked="" type="checkbox"/>	public - State
<input type="checkbox"/>	public - Federal
<input type="checkbox"/>	private

### Category of Property

(Check only **one** box)

<input type="checkbox"/>	building(s)
<input type="checkbox"/>	district
<input type="checkbox"/>	site
<input checked="" type="checkbox"/>	structure
<input type="checkbox"/>	building(s)
<input type="checkbox"/>	object

### Number of Resources within Property

(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
		buildings
		sites
1		structures
		Objects
		buildings
1	0	<b>Total</b>

### Name of related multiple property listing

(Enter "N/A" if property is not part of a multiple property listing)

Reinforced Concrete Bridges of Montana, 1900-1961

### Number of contributing resources previously listed in the National Register

3

## 6. Function or Use

### Historic Functions

(Enter categories from instructions)

TRANSPORTATION/Road-related (vehicular) =  
Bridge

### Current Functions

(Enter categories from instructions)

TRANSPORTATION/Road-related (vehicular) =  
Bridge

## 7. Description

### Architectural Classification

(Enter categories from instructions)

OTHER: Reinforced Concrete Arch Bridge

### Materials

(Enter categories from instructions)

foundation: Concrete

walls:

roof:

other: Concrete

## Narrative Description

Carter Bridge

Name of Property

Park County, Montana

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(Describe the historic and current physical appearance of the property. Explain contributing and noncontributing resources if necessary. Begin with a **summary paragraph** that briefly describes the general characteristics of the property, such as its location, setting, size, and significant features.)

### Summary Paragraph

The Carter Bridge consists of one contributing structure, a three-span reinforced concrete arch bridge. Built in 1921, the bridge consists of three open spandrel concrete arches. The structure is 285 feet in length. The bridge spans the Yellowstone River on Montana Secondary 540 about four miles south of Livingston, Montana. The secondary highway was, until 1961, the primary route through Paradise Valley, connecting US Highway 10 at Livingston with the north entrance to Yellowstone National Park at Gardiner. The setting of the bridge is still largely rural, but there has been an influx of modern residences constructed in its vicinity over the last forty years. The Montana Department of Fish, Wildlife and Parks' Carter Bridge Fishing Access Site is located adjacent to the bridge on the northeast side of the structure.

### Narrative Description

Carter Bridge carries Montana Secondary 540 (old US 89) across the Yellowstone River about four miles south of Livingston, Montana. The bridge is located at the northern end of the Paradise Valley at the head of a narrow canyon that opens into the Yellowstone Valley. The canyon cuts through tilted Paleozoic sedimentary rock formations that includes thick beds of Madison limestone. The Gallatin Range delineates the west boundary of the Paradise Valley, while the Absaroka Range looms to the east of the bridge. The Yellowstone River originates to the south within the boundaries of Yellowstone National Park. The area surrounding the bridge is used primarily for agricultural purposes, but there has been significant residential encroachment into the area over last forty years. The Montana Department of Fish, Wildlife and Parks' Carter Bridge Fishing Access Site is located off the northeast abutment of the bridge.<sup>1</sup>

The Carter Bridge consists of a three-span reinforced concrete arch structure. The structure is 285 feet in length and 25 feet wide with a roadway width of 24 feet. The bridge is comprised of one 95-foot and two 88-foot open-spandrel arches resting on ellipsoid concrete piers with corniced caps. The abutments are anchored by concrete boxes filled with rubble; concrete wing walls extend from the abutments along the river bank. The spans are each comprised of two concrete ribs connected by transverse concrete braces under the deck. The spandrels are open and have arched openings. The concrete deck is supported by the arch rings and concrete pillars. The overhanging deck is supported by stepped concrete brackets. The deck is also concrete with an asphalt overlay. It is flanked by raised concrete curbs. The original concrete balluster guardrails were replaced with the existing guardrails in 1954 when the Montana Highway Department widened the bridge's deck. The existing guardrails consist of steel W-beam rails mounted on steel channel section posts. The bridge was poured in place.

### Integrity

The Carter Bridge retains good integrity of design, materials, and feeling. The distinctive piers, rib arches and open spandrels are intact and unchanged. The deck of the structure was widened in 1954 and the original guardrails removed (according to the historic record, they were in poor condition when removed) and replaced with the existing steel W-beam rails. The guardrails, which were replaced during the historic period, do not detract significantly from the overall appearance of the bridge.

<sup>1</sup> David Alt and Donald W. Hyndman, *Roaside Geology of Montana*, (Missoula: Mountain Press Publishing, 1986), 203.

Carter Bridge  
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## 8. Statement of Significance

### Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing)

- ☒ A Property is associated with events that have made a significant contribution to the broad patterns of our history.
- ☐ B Property is associated with the lives of persons significant in our past.
- ☒ C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- ☐ D Property has yielded, or is likely to yield, information important in prehistory or history.

### Criteria Considerations

(Mark "x" in all the boxes that apply)

Property is:

- ☐ A owned by a religious institution or used for religious purposes.
- ☐ B removed from its original location.
- ☐ C a birthplace or grave.
- ☐ D a cemetery.
- ☐ E a reconstructed building, object, or structure.
- ☐ F a commemorative property.
- ☐ G less than 50 years old or achieving significance within the past 50 years.

### Areas of Significance

(Enter categories from instructions)

Engineering

Transportation

### Period of Significance

1921-1961

### Significant Dates

1921, 1954

### Significant Person

(Complete only if Criterion B is marked above)

### Cultural Affiliation

### Architect/Builder

George H. Shanley, architect

Montana Highway Department

B. M. Crenshaw Company

### Period of Significance (justification)

The Period of Significance includes the date the bridge was constructed, the year it was widened and the original guardrails removed, and the year the bridge was bypassed by the existing alignment of US Highway 89. The bridge is still in use.

### Criteria Considerations (explanation, if necessary)

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**Statement of Significance Summary Paragraph** (provide a summary paragraph that includes level of significance and applicable criteria)

Carter Bridge is eligible for listing on the National Register of Historic Places under Criteria A and C. The bridge is eligible under Criterion A because of its association with the Montana Highway Department's first phase of road and bridge improvements between 1915 and 1922. The department's program sought to make substantial improvements on the state's federal aid highway system in order to facilitate commercial and public transportation. Key to the success of the program was a system of modern and reliable bridges. Consequently, the highway department designed steel truss, timber, and reinforced concrete bridges to meet its goals. The Carter Bridge was a significant component of the road connecting US Highway 10 and Livingston with the north entrance to Yellowstone National Park at Gardiner. The bridge is also significant under Criterion C as a good example of a reinforced concrete open spandrel arch structure. The Montana Highway Department standardized the design for this type of bridge about 1920 and only built four of them. They constitute only a small part of the bridges designed and built by the department between 1920 and 1927. Except for the replacement of the original concrete guardrails in 1954, the Carter Bridge retains all of its original components and features and is an excellent representative example of the type.

**Narrative Statement of Significance** (provide at least **one** paragraph for each area of significance)

The Carter Bridge can be listed on the National Register of Historic Places under Criterion A for its association with the Montana Highway Department's first phase of the improvement of the state's transportation system from 1915 to 1922. The bridge was a component of a significant route south from Livingston to the north entry of Yellowstone National Park at Gardiner. Indeed, the bridge's distinctive design was developed at this location because of its situation in the scenic Paradise Valley and because it was on an approach road to the park. The bridge marked a collaboration between Park County, which paid for the bridge, and the Montana Highway Department, which designed and oversaw its construction. The bridge remained an important part of US Highway 89 in southeastern Montana until 1961 when it was bypassed by a new alignment of the roadway on the west side of the Yellowstone River. The bridge, however, continues to function as part of a state secondary highway.

The bridge is also an excellent and intact example of a reinforced concrete open spandrel arch bridge. The Montana Highway Department standardized the design about 1920 with the finalization of architectural drawings for the Second Avenue North and Tenth Street bridges in Great Falls. The designs for those structures, at the entrance to Great Falls, were adapted for the Carter Bridge, which was constructed the following year. The highway department only built four bridges of this type, before discarding the design in favor of simpler structures. Although the original guardrails were replaced by the highway department in 1954, the bridge retains the distinctive rib arches and open spandrels. The steel W-beam guardrails do not significantly detract from the overall appearance of the bridge. The bridge is an excellent example of the type and is eligible for the National Register under Criterion C.

**Engineering Significance**

The Carter Bridge is one of only three open spandrel reinforced concrete arch bridges remaining in Montana. The Montana Highway Department built this type of bridge at the entrances to Great Falls and on approach roads to National Parks. The design was meant to compliment Montana's spectacular scenery of an area and enhance the motorist's experience while nearing a national park.<sup>2</sup> The basic design of the bridge was developed by Great Falls architect George Shanley for the Second Avenue North and Tenth Street bridges. Montana Highway Department engineers adapted the design for use at other locations. The bridge was designed by the highway department and funded by Park County, a system common to bridge construction in Montana between 1915 and 1926, when the highway department assumed full responsibility for the design and construction of large bridges in the state.

<sup>2</sup> The other bridge crossed St. Mary's River on US Highway 89 near an entrance to Glacier National Park. The bridge also had significant structural problems and was replaced by the highway department in 1956.

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**Developmental history/additional historic context information** (if appropriate)

The Carter Bridge originated as one of the Montana Highway Department's showcase projects during the 1920s, but ended as one of its biggest disappointments and contributed to the demise in the use of this type of bridge in the state. The project involved the use of newly standardized multi-arch reinforced concrete bridge design based on the Tenth Street Bridge in Great Falls and developed by the highway department's engineers. They developed a design that would accommodate modern traffic and provide an aesthetically pleasing bridge on the approach to Yellowstone National Park in the Paradise Valley south of Livingston. Carter Bridge is located at the site of one of the earliest river crossings in Park County. The county replaced the first bridge, a log toll bridge built by Tom Carter in the early 1880s, with a 220-foot combination timber and steel span in 1898. High winds destroyed the bridge in 1908, and the county replaced it with a new timber and steel span built by the Montana Bridge and Iron Company of Livingston. High water damaged the bridge in 1918. The site's bad luck with timber and steel bridges compelled Park County and the highway commission to look at alternatives for a new bridge. In January 1919, the bridge department and the BPR adapted George Shanley's design for use at the Carter bridge crossing. On 15 August 1919, the county and Montana State Highway Commission awarded the project for the new bridge to the Ben Crenshaw Company of Livingston for around \$37,000.<sup>3</sup>

Problems plagued Crenshaw shortly after the company began work on the project. So much so, that it soon became obvious to highway department engineers and the First State Bank of Livingston, Crenshaw's bond holder, that the company was not quite up to the task of building the complicated structure. Design changes, inexperienced workers, and the lack of clear direction from the highway department caused Crenshaw to suspend work on the bridge for several weeks until the problems could be resolved.<sup>4</sup>

Crenshaw's shoddy work on the guardrails especially caused concern with highway department's chief engineer John Edy. He complained that the bridge's appearance was "very good at a slight distance, but rough when viewed from a short distance." He blamed the poor visual appearance on Crenshaw's inability to construct the proper concrete forms, which allowed the concrete to ooze out between the cracks. He criticized Crenshaw's work on the guardrails, noting that they appeared sufficiently "unworkmanlike as to inevitably draw public attention to its defects." In his haste to complete the project, Crenshaw had ignored the highway department's design specifications. In retaliation, the commission, at the recommendation of its engineers, declined to accept the bridge and Crenshaw refused to make the necessary changes. Eventually, the First State Bank hired workers to complete the work on the Carter Bridge.<sup>5</sup>

In June 1954, the Montana Highway Department hired Long Construction Company of Billings to widen the deck of the Carter Bridge and replace the existing guardrails. The \$33,000 project was not started until August of that year because the department failed to provide the necessary design plans. The concrete for the project was provided by a Livingston cement plant, while the Paper, Calmenson Company in Seattle supplied the reinforcing steel. The construction firm completed the project in December 1954. In the late 1990s, the Montana Department of Transportation completed a project at the bridge to repair a scour hole adjacent to the center pier. The pier was also strengthened at that time.<sup>6</sup>

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<sup>3</sup> "Construction File No. FAP 14: Carter Bridge," Montana Department of Highways Bridge Bureau Records, 1920-1985 (hereafter MDH Bridge Bureau Records), unprocessed collection, Montana Historical Society Research Center, Helena; Fredric L. Quivik, *Historic Bridges in Montana*, (Washington DC: National Park Service, 1982), 69; *Second Biennial Report State Highway Commission of Montana*, (Helena: State Highway Commission, 1921), 16, 64; Montana State Highway Commission Meeting Minute Books, Book 1, 197 (24 May 1919), 204, 205 (25 July 1919).

<sup>4</sup> Quivik, *Ibid*; Construction File No. FAP 14: Carter Bridge;

<sup>5</sup> Construction File, *Ibid*

<sup>6</sup> *Ibid*; Montana State Highway Commission Meeting Minutes, Book 12, 482, 483 (29 June 1954); Bridge Condition Survey No. S00540031+06621, Montana Department of Transportation, Helena.

Carter Bridge  
Name of Property

Park County, Montana  
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## 9. Major Bibliographical References

**Bibliography** (Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets)

Alt, David and Donald W. Hyndman. *Roadside Geology of Montana*. (Missoula: Mountain Press Publishing, 1986).

Axline, Jon. *Conveniences Sorely Needed: Montana's Historic Highway Bridges, 1860-1956*. (Helena: Montana Historical Society, 2005).

Bridge Condition Survey No. S00540031+06621. Montana Department of Transportation. Helena, Montana.

Bridge Inspection Record No. S00540031+06621. Montana Department of Transportation. Helena, Montana.

Construction File No. FAP 14: Carter Bridge. Montana Department of Highways Bridge Bureau Records. Montana Historical Society Research Center. Helena, Montana.

Montana State Highway Commission Meeting Minutes Books. Montana Department of Transportation. Helena, Montana.

Quivik, Fredric L. *Historic Bridges of Montana*. (Washington DC: National Park Service, 1982).

*Second Biennial Report State Highway Commission of Montana, 1919-1920*. (Helena: State Highway Commission, 1921).

### Previous documentation on file (NPS):

☐ preliminary determination of individual listing (36 CFR 67 has been requested)  
☐ previously listed in the National Register  
☐ previously determined eligible by the National Register  
☐ designated a National Historic Landmark  
☐ recorded by Historic American Buildings Survey # \_\_\_\_\_  
☐ recorded by Historic American Engineering Record # \_\_\_\_\_

### Primary location of additional data:

☐ State Historic Preservation Office  
☒ Other State agency  
☐ Federal agency  
☐ Local government  
☐ University  
☐ Other

Name of repository: Montana Department of Transportation

Historic Resources Survey Number (if assigned): \_\_\_\_\_

## 10. Geographical Data

### Acreage of Property 3.0

(do not include previously listed resource acreage)

### UTM References

(Place additional UTM references on a continuation sheet)

1 12 533845 5049129  
Zone Easting Northing

3                       
Zone Easting Northing

2                       
Zone Easting Northing

4                       
Zone Easting Northing

### Verbal Boundary Description (describe the boundaries of the property)

The boundary for the Carter Bridge is a rectangle measuring 285 x 35 feet. The rectangle encompasses the bridge and its approaches on both sides of the river. The boundary is centered on the bridge.

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**Boundary Justification** (explain why the boundaries were selected)

Boundaries for the Carter Bridge are drawn to encompass the three spans of the bridge, its immediate approaches and that portion of the Yellowstone River spanned by the bridge. The width is increased beyond the measurements of the structure to include the piers and abutments.

**11. Form Prepared By**

name/title Jon Axline/Historian  
organization Montana Department of Transportation date November 17, 2009  
street & number 2701 Prospect Avenue telephone (406) 444-6258  
city or town Helena state MT zip code 59620-1001  
e-mail jaxline@mt.gov

**Additional Documentation**

Submit the following items with the completed form:

- **Maps:** A **USGS map** (7.5 or 15 minute series) indicating the property's location.  
A **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.
- **Continuation Sheets**
- **Additional items:** (Check with the SHPO or FPO for any additional items)

**Photographs:**

Submit clear and descriptive black and white photographs. The size of each image must be 1600x1200 pixels at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map.

**(See Continuation Sheets)**

**Property Owner:**

(Complete this item at the request of the SHPO or FPO.)

name Montana Department of Transportation  
street & number 2701 Prospect Avenue telephone 406-444-6200  
city or town Helena state MT zip code 59620-1001

**Paperwork Reduction Act Statement:** This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C.460 et seq.).

**Estimated Burden Statement:** Public reporting burden for this form is estimated to average 18 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, PO Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Project (1024-0018), Washington, DC 20503.



United States Department of the Interior  
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## National Register of Historic Places Continuation Sheet

Section number 10 Page 1

Carter Bridge (24PA841)

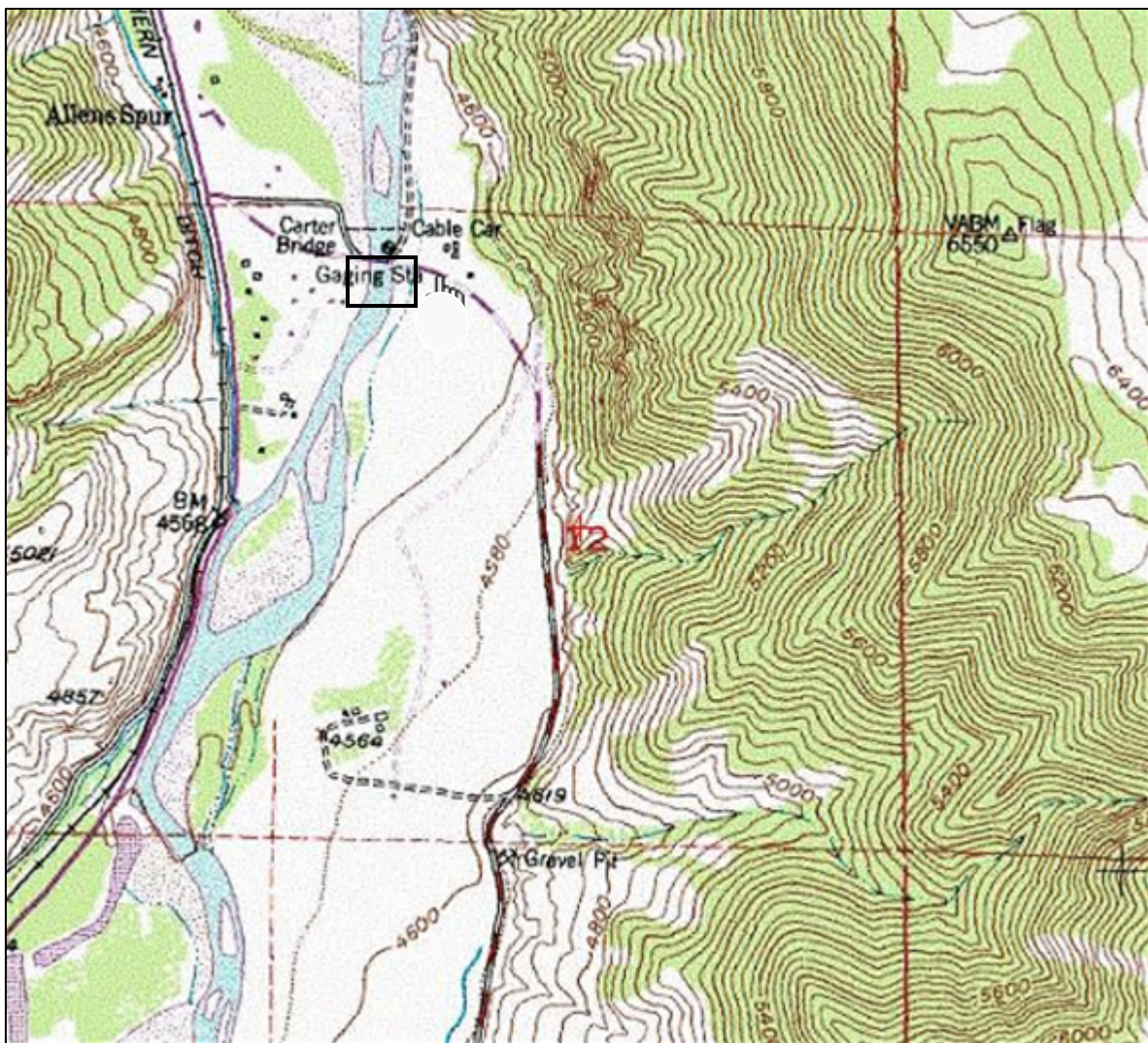
Name of Property

Park County

County and State

Reinforced Concrete Bridges of Montana,  
1900-1961

Name of multiple listing (if applicable)



Location of the Carter Bridge. Found on the Brisben, MT (1951) 7.5' Quadrangle map (Photorevised 1981).

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**National Register of Historic Places  
Continuation Sheet**

Carter Bridge (24PA841)

Name of Property

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Reinforced Concrete Bridges of Montana,  
1900-1961

Name of multiple listing (if applicable)

Section number Photographs

Page 1

**Photolog**

Name: Carter Bridge (24PA841)  
County and State: Park County, Montana  
Photographer: Kristi Hager  
Date of Photograph: 2005  
Location of original negative: Montana Department of Transportation. Helena, Montana.  
Description and view of camera: South profile. View to west-northwest.  
Photograph: MT\_ParkCounty\_CarterBridge\_0001

